

REMARKS

Initially, Applicants would like to thank the Examiner for indicating that claim 1 is allowable if rewritten to overcome the rejection under 35 U.S.C. § 112, second paragraph, and that claims 2, 4 and 27-28 are allowable if rewritten to overcome the rejections under 35 U.S.C. § 112, second paragraph, and to include all of the limitations of the base claim and intervening claims. Applicants note, however, that claims 2, 27 and 28 directly or indirectly depend from claim 1, which has also been identified as allowable. Therefore, claims 2, 27 and 28 do not need to be rewritten to include the limitations of the base and intervening claims. Applicants further note that the Examiner did not specifically identify claim 29 as allowable, even though claim 29 indirectly depends from claim 1, but also did not assert a patentability rejection thereagainst. Applicants therefore assume that the Examiner intended to identify claim 29 as being allowable.

Upon entry of the present amendment, claims 1-4 and 27-29 will have been amended to correct informalities in the claim language, to more clearly define the invention, and to overcome the Examiner's rejections under 35 U.S.C. § 112, second paragraph, while not substantially affecting or narrowing the scope of these claims. Also, claims 30-36 will have been entered for the Examiner's consideration. Claims 30-36 are directed to a rotor for use in a synchronous motor, as opposed to a asynchronous motor, and respectively correspond to claims 1, 2, 27, 28, 29, 3 and 4.

In the above-referenced Official Action, the Examiner rejected claims 1-4 and 27-29 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention, on various grounds. For example, claims 1-4 and 27-29 are asserted to be indefinite because recitation of the "adjacent one end" and the "center point"

of the rotor magnetic poles is unclear. The Examiner also provided alternatives to the objectionable language. Applicants respectfully submit that the amendments to claims 1-4 and 27-29 have overcome the Examiner rejections. Therefore, Applicants respectfully request the Examiner to withdraw the rejection under 35 U.S.C. § 112, second paragraph.

Also in the above-referenced Official Action, the Examiner rejected claim 3 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,845,837 to LLOYD. Applicants respectfully traverse this rejection, at least for the reasons stated below.

LLOYD does not teach or suggest *conductor slots* being positioned different distances from magnet retaining holes and having different slot lengths based on the conductor slots' positions around the periphery of the rotor iron core. Referring to Figs. 3-5 of LLOYD, the Examiner identified the magnetic slots 33 as the "magnet retaining holes," the cage slots 25 as the slots containing conductor bars "defined in an outer periphery of the rotor iron core," and reluctance barrier slots 37 as the one slot "positioned adjacent one end of the rotor magnetic poles." The Examiner accordingly asserted that LLOYD teaches that a distance between slot 37 and the magnet retaining holes (33) is smaller than a distance between any of the slots 25, "positioned at other locations of the rotor," and the magnet retaining holes (33). The Examiner also asserted that LLOYD teaches slots 25 having a smaller radial length at the center point of the rotor magnetic poles than the slot 37.

However, by definition, slots 37 of LLOYD do not contain conductors, but rather are reluctance barrier slots, and are therefore irrelevant with respect to claim 3. See col. 5, line 11. Slots 37 appear to more accurately correspond to the barriers 27 and 47 of the present invention, which

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prevent short circuits of magnetic fluxes developed between neighboring permanent magnets, which are not recited in claim 3. See page 32, lines 12-15; Figs. 1, 15. Rather, claim 3 recites that the slot containing a conductor bar adjacent to one end of the rotor magnetic poles is closer to the rotor magnetic pole than any of the other rotor slots containing conductor bars. Also, claim 3 recites that the slots containing conductor bars at the center point of the rotor magnetic poles have smaller radial lengths than the other slots containing conductor bars adjacent to the ends of the rotor magnetic poles.

In LLOYD, while the reluctance barrier slots 37 appear to be closer to the magnet retaining hole (33), and to have larger radial lengths than any of the slots 25 positioned elsewhere, the slots 37 simply do not contain conductors and therefore do not teach the invention as claimed in claim 3. Further, assuming for the sake of argument that slots 25 contain conductors, all of the slots 25 appear to be the same distance from the magnet retaining hole (33) and to have the identical radial length. See Figs. 3-5.

Accordingly, LLOYD does not disclose each and every element of Applicants' claimed invention. Therefore, withdrawal of the rejection under 35 U.S.C. § 102(b) based on LLOYD is respectfully requested. Further, Applicants submit that claim 4 is likewise allowable at least because it depends from claim 3, which Applicants submit has been shown to be allowable.

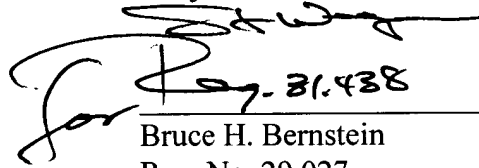
In view of the herein contained amendments and remarks, Applicants respectfully request reconsideration and withdrawal of previously asserted rejections set forth in the Official Action of June 20, 2003, together with an indication of the allowability of all pending claims, in due course. Such action is respectfully requested and is believed to be appropriate and proper.

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Any amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attached thereto.

Should the Examiner have any questions concerning this Amendment or the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,  
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